

Structure of the monoid of endomorphisms of \mathcal{T}_n

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The full transformation monoid \mathcal{T}_n consists of all maps from the set $\{1, \dots, n\}$ into itself and is possibly the most important example of a finite monoid. The description of the elements of the endomorphism monoid $\text{End}(\mathcal{T}_n)$ of \mathcal{T}_n was given by Schein and Teclezghi [1]. Surprisingly, the algebraic structure of $\text{End}(\mathcal{T}_n)$ has not been further investigated. In this talk, we will describe some key properties of $\text{End}(\mathcal{T}_n)$ such as its principal ideals, its set of idempotents, its regular elements and Green's relations.

References

- [1] B. Schein and B. Teclezghi, Endomorphisms of finite full transformation semi-groups. *Proceedings of the American Mathematical Society* 126, 1998, no. 9, 2579–2587.

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